

Gray County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/26/2017

Using the most recent IMPLAN data available (2015) adjusted for 2017, 16 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Gray County economy.¹

These 16 sectors have a total direct output of approximately **\$594.3 million** and support **835.8 jobs** in Gray County. Running the model for all 16 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Gray County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	835.8	17.96%	\$141,230,931	36.53%	\$594,314,497	153.71%
Indirect Effect	568.5	12.22%	\$51,629,188	13.35%	\$88,529,932	22.90%
Induced Effect	325.0	6.98%	\$21,195,472	5.48%	\$39,709,223	10.27%
Total Effect	1,729.3	37.17%	\$214,055,591	55.36%	\$722,553,652	186.88%

As shown in the above table, agriculture, food, and food processing sectors support **1,729.3 jobs**, or **37.17%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$722.6 million, roughly 186.88% of the economy.**

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 16 agriculture, food, and food processing sectors is approximately **\$214.1 million**, or **55.36% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **55.36% of the total economy.**

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **607.5 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Gray County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	607.5	\$418,540,913
Wholesale trade	196.8	\$47,046,514
Support activities for agriculture and forestry	116.8	\$11,757,238
Truck transportation	77.5	\$14,050,219
Grain farming	69.2	\$112,228,014
All other crop farming	47.1	\$16,288,424
Real estate	42.8	\$3,284,440
Accounting, tax preparation, bookkeeping, and payroll services	40.8	\$1,796,412
Other financial investment activities	32.2	\$3,647,127
Monetary authorities and depository credit intermediation	31.3	\$5,126,122

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$418.5 million** to the Gray County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	607.5	\$418,540,913
Grain farming	69.2	\$112,228,014
Wholesale trade	196.8	\$47,046,514
All other crop farming	47.1	\$16,288,424
Farm machinery and equipment manufacturing	30.3	\$15,627,660
Dairy cattle and milk production	29.9	\$15,430,716
Truck transportation	77.5	\$14,050,219
Owner-occupied dwellings	0.0	\$12,263,040
Support activities for agriculture and forestry	116.8	\$11,757,238
Monetary authorities and depository credit intermediation	31.3	\$5,126,122

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Gray County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	0.8	\$4,645,196.44
Grain farming	69.2	\$112,228,012.08
Vegetable and melon farming	0.2	\$70,543.95
Greenhouse, nursery, and floriculture production	1.9	\$334,155.38
Cotton farming	1.0	\$411,721.47
All other crop farming	47.1	\$16,288,423.54
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	607.5	\$418,540,893.55
Dairy cattle and milk production	29.9	\$15,430,715.56
Poultry and egg production	2.4	\$3,092,121.12
Animal production, except cattle and poultry and eggs	10.6	\$4,377,668.86
Bread and bakery product, except frozen, manufacturing	11.3	\$1,138,721.47
Frozen cakes and other pastries manufacturing	0.1	\$17,904.80
Farm machinery and equipment manufacturing	30.3	\$15,627,660.75
Lawn and garden equipment manufacturing	0.5	\$225,666.67
Veterinary services	4.8	\$540,683.63
Landscape and horticultural services	18.1	\$1,344,385.50

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Gray County, the retail sector was omitted.